臺灣地區冷季異常或特殊降水近期研究

Recent research on abnormal or special precipitation in Taiwan during the cold season

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摘　　要

「前事不忘，後事之師。」防災工作應汲取經驗作策略調整才能避免重蹈覆轍。本研究探索與綜整臺灣地區冷季異常或特殊經典降水之新近個案，主要選擇 2022 年秋至 2023 年春重要典型個案，探討臺灣地區冷季主要異常及特殊降水個案，內容著重研究不同天氣條件下的機制原理及關鍵物理參數所呈現之量值特性。研究結果顯示，冷季異常或特殊降水發生時，某些特定的熱、動力物理參數，其量值特徵具有重要的指引意義，可做為短期天氣診斷分析和氣象預報之參考。

關鍵字：東北季風異常降水，共伴效應，慣性重力波，定量降水預報(QPF)，條件性對稱不穩定(CSI)

Abstract

" Experience is the best teacher. " Disaster prevention work must draw on past experiences to adjust strategies and avoid repeating mistakes. This study explores and synthesizes recent cases of abnormal or special classical precipitation during the cold season in Taiwan. It mainly selects important typical cases from autumn 2022 to spring 2023 to explore the main abnormal and special precipitation cases during the cold season in Taiwan. The content focuses on studying the mechanisms, principles, and quantitative characteristics of key physical parameters under different weather conditions. The research results show that when abnormal or special precipitation occurs during the cold season, the quantitative characteristics of certain specific thermal and dynamic physical parameters have important guiding significance and can be used as a reference for short-term weather diagnosis analysis and meteorological forecasting.

Key words: Northeast monsoon anomalous precipitation, co-associated effect, inertial gravity waves, quantitative precipitation forecast (QPF), conditional symmetric instability (CSI)